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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,371	10/21/2003	Lawrence W. Yonge III	04838-075001	6509
26161	7590	08/20/2007		
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER TRAN, PHUC H	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			08/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/695,371

Applicant(s)

YONGE ET AL.

Examiner

PHUC H. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14, 17, 20-27, 30-34 and 36-54 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 15, 16, 18, 19, 28, 29 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **ETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: "providing CSMA communication during times outside the contention free intervals" fails to disclose in specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed. Appropriate correction is required.
2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

3. The drawings are objected to because all blocks in figures 1-2 should be labeled with descriptive legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of

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the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

#### *Claim Objections*

5. Claims 1-43 are objected to under 37 C.F.R. 1.75 because of the following formalities:

In claim 1 line 8, "other stations" seem to refer back to "other station" recited at line 7. If this is true, it is suggested to change "other stations" to --- the other stations ---. The same is true with the terms "a plurality of stations" recited in claim 2 and claim 5; "other stations" recited in claim 19.

Claims 3-4, 6-18 and 20-43 are objected to since they depend from claim 1 or claim 5.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2-4, 27 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding to claim 2, the “distributing control over initiation and makeup” fails to particularly point out where distributing control come from.

In claim 27 line 3, “the short time interval” lacks antecedent basis because it is not know what “the short time interval” applicant is referring to.

In claim 38 line 2, “the power cycle” has no antecedent basis.

***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 of U.S. Patent No. 6907044 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because of following:

For claim 1, the Patent discloses a method of operating in a network in which a plurality stations communicate over a shared medium (claim 1, lines 1-3 of the Patent), comprising using a carrier sense multiple access (CSMA) service for ordinary communication between the plurality of stations (claim 1, lines 7-9 of Patent); having a first station that desires to establish a first session of regularly repeated contention-free transmission intervals broadcast information descriptive of the first session to the other stations, wherein the first station can be any of the plurality of stations (claim 1, lines 4-7 of the Patent); and having other stations that receive the broadcast from the first station defer from transmitting during the contention-free intervals of the first session (claim 1, lines 13-15 of the Patent).

Applicant's claim 1 merely broadens the scope of patent by eliminating the term "a plurality of peer devices communication". It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re karlson, 136 USPQ 184 (CCPA). Also note Ex Parte Raine, 168 USPQ 375 (bd. App. 1969) ;

*Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-11, 14, 17, 20,21,23-27,30,31,33,34, and 37-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonge et al. (6,909,723) in view of Sugar et al. (2002/0061031).

Note: the phrases “can” and capable of “recited in claims 1-3,5,6,9,20-21, and 10 are not positively recited claimed limitations. Therefore, the limitations after the phrases are not considered the claimed limitations. It is suggested applicants remove the phrases.

- With respect to claims 1-11, 14, 17, 20,21,23-27,30,31,33,34, and 37-54, Yonge et al. disclose a method/system segment bursting with priority pre-emption and reduced latency comprising:

a plurality stations(see stations in figure 29) communicate over a shared medium (see bus 14 in figure 29), comprising using a carrier sense multiple access (CSMA) service for ordinary communication between the plurality of stations; having a first station that desires to establish a first session of regularly repeated contention-free transmission intervals (see column 38 lines 5-8) broadcast information descriptive of the first session to the other stations and having other stations that receive the broadcast from the first station (see column 43 lines 34-49);

further comprising distributing control over initiation and makeup of transmissions within the contention free intervals to a plurality of stations so that any of

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the plurality of stations can independently initiate a transmission within the contention free interval (see column 43 lines 29-40);

further comprising distributing control over the maintenance and termination of transmissions within the contention free interval to the plurality of stations so that any of the plurality of stations can independently terminate a transmission within the contention free interval (see column 43 lines 29-40);

wherein the plurality of stations act as peers with respect to one another in initiating, maintaining, and terminating transmissions within the contention free interval (see column 43 lines 29-40);

further comprising distributing control over the maintenance and termination of transmissions within the contention free interval to the plurality of stations so that any of the plurality of stations can independently terminate a transmission within the contention free interval (see column 43 lines 29-40);

wherein the regularly repeated contention free interval is approximately periodic (see column 38 lines 5-8);

wherein the contention free interval supports a plurality of transmissions, each using a different time segment within the contention free interval, so that a plurality of data streams can be transmitted using the contention free interval, with each data stream generally assigned to one of the different time segments (see column 22 lines 39-48);

wherein at least one data stream is assigned to a plurality of different time segments spaced apart within the same contention free interval, thereby reducing latency for the at least one data stream (see column 22 lines 39-48);



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wherein each of the stations sending a transmission during the contention free interval begins transmitting in response to recognizing that the transmission immediately prior to it has concluded (see column 22 lines 39-48);

wherein information characterizing each of the plurality of transmissions is conveyed to substantially all of the plurality of stations (see column 43 lines 34-39);

wherein transmissions of different priority classes in the system (see column 1 lines 55-60).

wherein a limit is set on the fraction of time within the contention free interval that may be used by transmissions of a particular priority class (see column 1 lines 55-63);

wherein different fractions of the contention free interval are assigned to different priority classes, so that some priority classes are allocated more of the contention free interval than other priority classes (see column 1 lines 55-63);

wherein the sequence of transmissions within the contention free interval is ordered by priority class, with transmissions of higher priority classes occurring earlier than transmissions of lower priority classes (see column 1 lines 55-63);

wherein each of the stations independently follows a set of admission rules common to the plurality of stations (see column 1 lines 55-60).

wherein the length of the contention free interval varies with demand for contention free transmissions (see column 1 lines 55-60);

wherein in addition to the other stations that defer from transmitting during the contention-free intervals there are a plurality of legacy stations that lack the capability to defer (see column 2 lines 24-25).

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wherein the shared medium is an alternating current (AC) power line (see column 38 line 29).

wherein the contention free intervals are approximately synchronized to the power cycle (see column 38 line 27-32, lines 55-60).

wherein the information descriptive of the first session comprises the duration of the contention-free intervals (see column 1 lines 55-60);

wherein the information descriptive of the first session comprises a period of the contention-free intervals (see column 1 lines 55-60);

wherein the information descriptive of the first session comprises the time at which the first session will begin (see column 1 lines 55-60);

wherein the information descriptive of the first session comprises the address or addresses of the station or stations that are the intended receivers of the data to be transmitted during the first session (see box 764 in figure 36);

wherein the information descriptive of the first session comprises the address of the station that is establishing the first session (see box 764 in figure 36);

wherein the method further comprises having the first station transmit termination information during the first session, the termination information including the time at which the first session will end (see column 5 lines 33-34);

wherein at least a portion of the information descriptive of the first session is transmitted in one or more header fields of packets broadcast over the network (see column 5 lines 33-34);

wherein at least a portion of the information descriptive of the first session is transmitted in the packet body of packets broadcast over the network (see column 5 lines 33-34);

wherein at least a portion of the information descriptive of the first session is fixed ahead of time and is not included in the information descriptive of the first session (see column 5 lines 33-34);

wherein the information descriptive of the first session is broadcast using the CSMA service (see column 5 lines 20-21);

wherein the information descriptive of the first session is broadcast using the regularly-repeated contention-free session (see column 38 lines 5-8); and

wherein one or more stations other than the first station may propagate the session information generated by the first station (see column 5 lines 20-21).

- With respect to claims 1-11, 14, 17, 20,21,23-27,30,31,33,34,37, and 38-54, Yonge et al. disclose all the subject matter of the claimed invention with the exception of deferring from transmitting from the other station during the contention free intervals of the first sections in a communications network. Sugar et al. from the same or similar field of endeavor teaches the slave node (other node) may only transmit after it has been polled by the master node (see paragraph 60 lines 1-4. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use deferring as taught by Sugar et al. in the communication network of Yonge et al. The other station can defer transmitting as taught by Sugar et al. can be implemented/modified into the network of Yonge by using the control signals to stop transmission from the other station. The

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motivation for doing it because it provides the reliability to the system since it prevents the congestion.

12. Claims 22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonge et al. in view of Sugar et al. as applied to claims 1 and 5 above, and further in view of Haigh (5,793,861).

- With respect to claims 1-11, 14, 17, 20, 21, 25, 31, 33, 34, 37, and 38-54, Yonge et al. and Sugar et al. disclose all the subject matter of the claimed invention with the exception of the transmissions being terminated following a last in, first out protocol. Haigh from the same or similar field of endeavor teaches the last in and first out (see column 2 lines 30-31). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the transmissions being terminated following a last in, first out protocol as taught by Haigh in the communication network of Yonge et al. and Sugar. The transmissions being terminated following a last in, first out protocol as taught by Haigh can be implemented/modified into the network of Yonge and Sugar by using the FIFO to stop transmission from the other station. The motivation for doing it because it prevents the congestion and provides a throughput of the system.

13. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yonge et al. in view of Sugar et al. as applied to claims 1 and 5 above, and further in view of Hong et al. (2005/0192011).

- With respect to claim 32, Yonge et al. and Sugar et al. disclose all the subject matter of the claimed invention with the exception of using the unique identifiers in the

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communications network. Hong et al. from the same or similar field of endeavor teaches the unique identifiers (see column 7, SS unique identifiers in table 3 ). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the unique identifiers as taught by Hong et al. in the communication network of Yonge et al. and Sugar .The unique identifiers as taught by Hong can be implemented/modified into the network of Yonge and Sugar since they do teach identifiers. The motivation for doing it because it adapts to the network requirements.

#### *Allowable Subject Matter*

14. Claims 12,13,15,16,18,19,28,29, and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yun et al. (2006/0045059), Yonge et al. (6,671,284),Dail et al. (5,570,355), and Yamaguchi et al. (2006/0077997) are all cited to show systems which are considered pertinent to the claimed invention.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHI PHAM can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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